

REPLY

To: Examiner of the Patent Office

1. Identification of the International Application
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(5) **Contents of Reply**

According to PCT written opinion (first), sent on 2004, July, 20, claims 1 through 17 have novelty, but claims 1 through 5, claims 9 through 15, and claim 17 do not have inventive step, and claims 6 through 8 and 16 have inventive step. The rejection based on lack of inventive step is explained in "cited references and explanation." Accordingly, the applicant amended claims below, and further argue against written opinion.

- (i) Claims 1 through 5 have been cancelled, because the Examiner states that they do not have inventive step in written opinion.
- (ii) Since claim 6 which depends from claim 5 has inventive step, it has been amended to be rewritten in independent form. The applicant believes that amended claim 6 has inventive step and has an appropriate form.
- (iii) Since claim 7 which depends from claim 5 or 6 has inventive step, it has been amended to be rewritten in independent form. The applicant believes that amended claim 7 has inventive step.
- (iv) Since claim 8 which depends from any one of claims 5 through 7 has inventive step, it has been amended to be rewritten in independent form. The applicant believes that amended claim 8 has inventive step.
- (v) Claim 9 which depends from any one of claims 5 through 8 has been amended to depend from any one of claims 6 to 8. Since claim 9 has been amended to depend from any one of claims 6 to 8, the applicant believes that amended claim 9 has inventive step.
- (vi) Claim 10 has been cancelled, because the Examiner states that claim

10 does not have inventive step in written opinion.

(vii) Claim 11 which depends from claim 10 has been amended to be rewritten in independent form.

According to the written opinion, the invention defined in claim 11 is substantially the same as those disclosed in the cited references 1 and 4 except for structural features. However, any technical concept of the invention defined in claim 11 is not described in the cited references 1 and 4. The invention defined in claim 11 is such that, a grinding diamond disc comprising a plurality of diamond grains which are bound on a region of a disc surface from an outer diameter side of a center region to a peripheral edge region and are not bound on the centre region, and the disc surface to which the plurality of diamond grains are bound includes a center side region and a peripheral side region located on an outer periphery of the center side region, and the diamond grains are arranged to form the character or the graphic drawn in the pointillist manner in the center side region. That is, in the invention of claim 11, the disc surface to which the plurality of diamond grains are bound includes a center side region and a peripheral side region, while the cited reference 1 does not disclose or suggest such a construction, but discloses that the entire disc surface to which the diamond grains are bound is integral.

Indeed, the cited reference 4 discloses that the diamond grains are arranged to draw a graphic in a pointillist manner, and the graphic is drawn on an entire surface on which the diamond grains are bound.

Therefore, the invention defined in claim 11 is not easily anticipated by those skilled in the art by combining "the diamond grains

are arranged to draw a graphic in a pointillist manner, and the graphic is drawn on an entire surface on which the diamond grains are bound" with "the entire disc surface to which the diamond grains are bound is integral".

In the invention defined in claim 11, the disc surface to which the plurality of diamond grains are bound includes a center side region and a peripheral side region located on an outer periphery of the center side region, and the diamond grains are arranged to form the character or the graphic drawn in the pointillist manner in the center side region. Thereby, the characters or graphics are drawn in the center side region which performs grinding in a lower degree to display a manufacture thereof or the like, and the peripheral side region which performs grinding in a higher degree performs grinding with performance substantially as high as that of the disc which is not provided with the graphics or the like. The feature of the invention of claim 11 is such that, by paying attention to the degree to which the grinding is performed, the surface to which the diamond grains are bound is divided into two regions, to carry out efficient grinding, and the manufacture or the like is displayed.

Such a technical concept is not disclosed or suggested in the cited references 1 and 4.

Therefore, the invention defined in claim 11 is not easily anticipated by those skilled in the art based in the cited references 1 and 4.

(viii) Claims 12 to 14 have been cancelled, because the Examiner states that these claims do not have inventive step.

(ix) The applicant does not accept rejection against claim 15, but argue below.

According to the written opinion, the invention defined in claim 15 is substantially the same as those disclosed in the cited references 1 and 6 except for structural features.

However, any technical concept of the invention defined in claim 15 is not described in the cited references 1 and 4. The invention defined in claim 15 is such that a grinding diamond disc which is circular in a front view, the grinding diamond disc having a mounting hole formed in a center region of a disc surface thereof, the grinding diamond disc comprising: a protruding portion formed at a peripheral edge of the grinding diamond disc and configured to protrude forward and backward, wherein the diamond grains are bound on the protruding portion. In such a construction, the protruding portion performs cutting in a limited sense or groove forming efficiently with respect to the materials to be ground such as concrete or stone, and the region located radially inward relative to the protruding portion does not interfere with a cutting action.

On the other hand, the diamond disc of the cited reference 1 (e.g., see Fig. 7) discloses that the protruding portion is provided substantially entirely except for the center region. Such a diamond disc does not performs cutting in a limited sense efficiently. This is because, the substantially entire front and rear surfaces of the diamond disc contact a cut face of the material to be ground, and the diamonds which are less resistant to heat tend to disengage the disc surface. As a result, efficient grinding is not carried out. In addition, a diamond tool of the cited

reference 6 is hand operated trowel tool, and cannot substantially perform cutting. Therefore, such a diamond tool has a function completely different from that of the invention of claim 15.

Such a technical concept is not disclosed or suggested in the cited references 1 and 6.

Therefore, the invention defined in claim 15 is not easily anticipated by those skilled in the art based on the cited references 1 and 6.

(x) Claim 16 which depends from claim 15 has been amended to be rewritten in independent form, because the Examiner states that it has inventive step.

(xi) Since claim 17 which depends from claim 15 or 16 which has inventive step, it is believed to have the inventive step as well.

(xii) Amendments to the recitation on page 11 line 5 which contains errors are intended to include the feature recited in claim 17 and not to add a new matter.

Please review the amendments to the claims, and the applicant believes that the amended claims have inventive step.